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will none the less continue to be active. There will always be dissimilar races, there will always be races superior and races inferior. But on the whole, humanity will be advanced, its means of control over natural phenomena will be enlarged ; at the same time its power of resistance to those events which thus far have sometimes controlled it, will be increased. Nothing, then, warrants us in thinking that the civilisations of the future can in any way be inferior to those of the present day, but on the contrary we even go so far as to predict that in some direction yet unknown, they will far outstrip them.

THE NEGRO AS A SOLDIER.*

By SANFORD B. HUNT, M.D., late Surgeon U. S. Volunteers.

ETHNOGRAPHICAL causes have always been active in the production of wars, and the existence of slavery was undoubtedly the ultimate cause in the war of the Rebellion. Yet, though it involved the deepest problems of race, it was not in itself a war of races. It was a struggle between two geographical sections of the same race and nation as to the just status of a foreign element which had become domiciliated among us by the act of our ancestors and which, in itself powerless, had by mere bulk and magnitude acquired a controlling importance in national affairs. During this struggle the negro remained passive. His ideas of the struggle were not revolutionary, but religious. He believed and waited, his simple mind filled with the grand metaphors of Holy Writ, and his doubts all silenced by an implicit faith that in the Lord's good time his deliverance would come. When it was decided by Government to employ him as a soldier, he cheerfully enlisted as he found opportunity. But when, by accident of locality, he was unable to reach our lines, he remained a faithful and quiet slave. In no instance did he assume leadership, in no instance did he organise to strike a blow for his own liberty. Yet, in all instances, he was patiently loyal to his own race and to the cause of the Union.

This passivity is a moral element which might well create many doubts as to his efficiency as a soldier. Aside from the intemperate

* We are indebted to Dr. W. A. Hammond, late Surgeon-General U. S. Army, for a copy of this valuable report to the U. S. Sanitary Commission.

opposition of negro-haters, many of his calmer friends could only look upon the experiment as one involving serious risks of failure. Had he the physique to endure hardship? Could he acquire the manual of arms and perfect himself in tactics? Had he the necessary physical courage? Would he not, when his savage blood was up in the fever-heat of battle, entail disgrace upon our cause by acts of outrage? Was not the profession of the soldier in its essence too noble and manly for this pariah of the land? All thinking minds acknowledged these doubts, and with many they became at once convictions.

The scepticisms entertained as to the capacity of the negro for the duties of a soldier found voice even in the Acts of Congress authorising his enrolment. The first Act only impliedly makes him a soldier. In the Act of Congress approved July 17th, 1862, we find the following :—

“SEC. II.—*And be it further enacted*: That the President of the United States be authorised to employ as many persons of African descent as he may deem necessary and proper for the suppression of the Rebellion, and, for this purpose, he may *organise and use them in such manner*, as he may judge best for the public welfare.”

A little later another Act was passed exhibiting the same spirit of hesitancy. We quote :—

“SEC. XII.—*And be it further enacted*: That the President be and he is hereby authorised to receive into the service of the United States, for the purpose of constructing intrenchments, or performing camp service or any other labour, *or any military or naval service for which they may be found competent*, persons of African descent, and such persons may be enrolled and organised under such regulations not inconsistent with the Constitution and Laws, as the President may prescribe.”

Even here, the name of soldier is not employed, and the precedence given to his employment as a labourer expressively indicates the hesitation felt by Congress and the people. And with a just sense that in thus employing the negro they opened the way to questions of deepest moment that might lie beyond and incurred obligations which would change the political status of four millions of human beings, they enacted another section conferring freedom on the negro, his wife, his mother and his children, who should serve in our armies, provided always that the master or owner of the negro should have enlisted in the service of, or in some way have aided and abetted the cause of the Rebellion.

Men looked at this startling innovation with different eyes. The earnest believer in a common humanity rejoiced; the careful statesman hesitated; the prejudiced denounced; and the pure scientist

looked upon it as a grand experiment on a scale of such magnitude as to render its results decisive. Every step, therefore, of the enlistment of 180,000 negroes was watched, by friend and foe, with a lively interest.

Enlistments of negroes, however, had begun before the passage of the Act of July 17th, 1862. The first black troops raised, were recruited in Kansas—the Waterloo of slavery,—by Col. James Williams, and his regiment for a long time was known as the “First Kansas Coloured Volunteers,” or, more familiarly, as the “First Nigger.” Colonel Williams acted without sanction and, of course, under difficulties that would have crushed a man less indomitable. How he fed or clothed his men is one of the unsolved mysteries. How he disciplined them is known. In one case, three members of one company, intoxicated by their new position, committed an infamous outrage. Twenty-four hours later, they had been tried, convicted and shot, the firing detail being made from their comrades. The subsequent history of this regiment is one of active service, of hard fighting and of heroic courage.

The first grand movement in the enlistment of negroes, was in the organisation of the *Corps d'Afrique* at New Orleans, and immediately after that coloured organisation became general in all the Slave States occupied by our forces. Some regiments were also raised at the North, the 54th Massachusetts being a notable example. We believe that, with the exception of that regiment, all the negro troops were taken up as United States volunteers, including the two regiments raised in Kansas and known, up to the spring of 1865, as the First and Second Kansas Coloured Infantry. But very many coloured troops were credited to the quotas of Northern States. Counties and cities sent recruiting agents to the South, and by paying bounties, induced negroes to credit themselves to New York, Boston or Philadelphia, as the case might be.

It was at first proposed to confine the use of these troops to the holding of sea coast and other fortifications, especially in malarial districts, with the idea that they were not liable to the diseases peculiar to those localities. As our experience enlarged, they were employed in campaigns, battles, and sieges, and were in many cases assigned to tasks requiring all the steadiness of veterans.

The conclusions which we are now justified in forming as to the value of the negro as a soldier affect his physique, his capacity to learn tactics, his providence or improvidence in the care and cooking of his food, his powers of resistance to hunger and fatigue, the diseases peculiar to him, if any, and those to which he is most usually subject, his morale, including his courage, cheerfulness, and obedience, and finally his comparative intellectuality.

Aptitude for Drill. The well known imitative faculty of the negro, together with his natural fondness for rhythmical movement, are elements of character which were promptly improved by the drill-officers by whom the recruits were instructed. The habit of obedience, inculcated by the daily life of the slave was also valuable, and it was soon found that, in the drill of the soldier, the negro lacked no essential. In cleanliness, however, there was a deficiency, though that was overcome in those instances where the discipline was rigid. Some of the regiments of the *Corps d'Afrique*, organised at New Orleans, were models of soldierly neatness and precision; while others, less carefully officered, were slovenly and careless.

Capacity for Marching. The large, flat, inelastic foot of the negro—almost splay-footed—was at first considered an objection; but experience has not sustained the idea. I have known a command of about 1,500 negroes to march 78 miles in 76 hours—part of the distance over a rough mountainous road—with remarkable ease and without increasing the sick-list, except from blistered feet. The general experience of army officers has decided that the negro marches as well as the majority of troops. His large joints and projecting apophyses of bone give a strong leverage to the muscles attached to or inserted in them. Yet in unfavourable circumstances there is reason to suppose that he fails to endure prolonged fatigue as well as the white man.

Endurance of Fatigue and Hunger. In response to inquiries addressed by the New Orleans Agency of the Sanitary Commission, Surgeon Blackwell, 81st U.S.C.T., expresses the opinion that the negro bears fatigue better than the white man. Other officers, among them Surgeon Humphreys of the 55th U.S.C.T. and Surgeon F. E. Piquette, in charge of the U.S.A. General Hospital for Coloured Troops at New Orleans, state with equal positiveness, that he is inferior in endurance; that “he is *at present*, too animal to have moral courage or endurance.” After full discussion with all the leading surgeons in charge of negro troops in Louisiana and Alabama, Dr. Owen M. Long reports to the commission that, “the coloured soldier does not endure fatigue as well and as long as the white, but he can endure hunger for a much longer period.” Dr. Long, in speaking of cases of exposure and hardships, says:—“In this instance, the *morale* of the white man steps in and often aids him in overcoming the situation.”

Such I believe to be the general opinion of observers. The negro loses the impulse of his natural gaiety, and becomes bitter and despondent; though, if well-fed, as in the instance of the severe march mentioned above, he sustains himself well.

Powers of Digestion and Assimilation. The negro is a heavy feeder. His plantation ration was usually confined to bacon and corn meal, eked out by such vegetables and poultry as he was allowed to raise, or such game as could be found in stream or forest. In the army he speedily adapted himself to the ration, was uniformly fond of "hard tack" and preferred bacon to beef. Even in the climate of the Lower Mississippi the tropical origin of the negro shows itself in some difficulty in maintaining animal heat. Hence, probably, their instinctive fondness for fat bacon, opossum, and coon. All our reports concur, practically, in the opinion that the negro, under a fair ration, has good digestive powers and manifests no peculiar tendency to diseases of the alimentary tract.

Without being especially provident in the care of his ration, he is a very fair forager, and has a long list of foods not relished by the white soldier. He is also a liberal patron of the sutler. Negro regiments, in my experience, usually consumed all their ration, and as much more as they could conveniently obtain.

Immunity from, or Liability to, certain Diseases. One of the strongest arguments used in favour of the employment of negro troops was their supposed immunity from malarial forms of disease. There was a wide-spread belief in this idea, which has not been sustained by experience. We cannot better express our own convictions, resting on a very considerable observation, than by quoting somewhat at length from reports made to the commission by Dr. Ira Russell, who has given this subject the most careful study at St. Louis, at New Orleans, and in Virginia. Dr. Russell says, in a report on the coloured hospitals of Richmond, Norfolk, etc., that he found the opinion of numerous surgeons whom he consulted to be as follows:—

"First. The negro bears injuries and recovers from wounds quite as well as the white man."

"Second. Gangrene is of rare occurrence."

"Third. Malarial, typhoid, and bilious fevers do not occur more frequently or terminate more fatally than among the white race."

"Fourth. Pneumonia, pleuro-pneumonia, and measles are more frequent and fatal than among the white race."

Two of the surgeons, Drs. Maillard and Ela, have had a good deal of experience among the coloured population in the contraband hospitals at Portsmouth, Norfolk, and on the adjacent plantations. In reply to the query, "To what diseases is the negro more subject than the white man?" they replied, without hesitation, "To pneumonia and pulmonary inflammations." * * * * * "The system of slavery was calculated, in various ways, to stimulate child-bearing. The mother had no responsibility—no care for the support

of herself or her children. Breeding enhanced her value—to be a *cheap* negro was a disgrace. But, while the slave-holder understood how to stimulate child-bearing, his method of rearing children was very bad. The importance of cleanliness, good food, warm clothing, and proper shelter was but indifferently understood; hence, many of these children grew up with impaired constitution, affected with scrofula and tuberculosis. Dr. Seymour thinks that eruptive diseases, such as small pox, measles, and scarlatina, are severe with coloured children, and many die from pulmonary complications.”

There is, or was, among inexperienced medical officers, a belief that negroes are not fully amenable to remedies. Sudden and accountable deaths frequently occurred in the hospitals, and came to be considered a negro peculiarity. In some cases the superstition of “fetichism” was responsible for this. The patient would believe himself possessed with a devil, or to have been subjected to the baleful influence of the unholy charms of some witch; he thus became hopeless, despondent, and apathetic. Upon these points we again quote from Dr. Russell:—

“I have given careful attention to the symptoms and pathology of disease as exhibited in the negro, and as modified by his peculiarities of constitution, habits and modes of life. I have also made careful inquiries of surgeons on duty in negro regiments and in the negro hospitals at St. Louis, Mo., Nashville, Tenn., Washington, D. C., Alexandria, Richmond, and Hampton, Va.”

“All the intelligent surgeons agree with me that a thorough knowledge of the habits and idiosyncrasies of the negro are of the utmost importance in order to understand and successfully treat his diseases. Much of the lack of success in treating disease among this unfortunate class of our population is undoubtedly due to ignorance of such facts. Two hundred years of servitude, the implicit obedience required, the exemption from all care and anxiety to provide for the future, the extinguishment of all hope of improvement in his civil or social relations, has produced marked physical and moral effects. Self-reliance and exercise of the will have never been cultivated or formed any part of his education. His highest ideal of enjoyment has consisted in freedom from toil and the gratification of the lower animal instincts.”

After alluding to various other and obvious hygienic causes affecting the negro, Dr. Russell says:—

“When sick, he will take neither food nor medicine, unless administered by some other person. Many sick negroes have died in consequence of this neglect, much to the astonishment of the physician, who had faithfully prescribed all that was needed of both. He is superstitious, and believes in charms and diabolical agencies, and often imagines that he is the victim of some supernatural influence, from which it is impossible to extricate himself. When under the

influence of this hallucination, he becomes indifferent, despondent, and gives up in utter despair, dying without apparent cause, leaving the impression on the physician's mind of lack of vital power, when, if the case had been thoroughly understood, the explanation would have been found in the mysterious influences of the mind working upon the body. But little reliance can be placed on the subjective symptoms as given by the negro. His ignorance of terms, and his obscure and indefinite mode of describing sensations only serve to confuse and perplex. Trivial symptoms are greatly magnified, while grave ones are entirely overlooked. The intensity of physical suffering is his measure of danger. The intelligent physician soon learns that he must treat a negro as he would a child. At a glance, he knows that the pale ashen colour of the skin indicates disease, while the sleek, glossy hue is the sure sign of health. He gives but little attention to the symptoms described by the patient, but resorts at once to the physical signs. When such precautions are taken and careful investigation made, but little difficulty will be experienced in properly diagnosing the diseases of the negro."

It will be seen, we think, that the conditions of the negro thus discussed, which certainly impair his efficiency or his durability as a soldier, are not intrinsic to his race, but are to a great extent educational, and may be expected to disappear under the energising influences of freedom and the teacher. Fortunately, even this expectation has already been tested and proved to be correct by comparison between the free negro recruits from the North and the grossly ignorant slaves enlisted from the plantations of the South. The difference, says Dr. Russell, consists in the greater dependence of the recently enlisted enslaved upon the care of their officers and indifference to personal necessities and comforts. Surgeon-General Dale, of Massachusetts remarks:—

"The difference between the coloured volunteers recruited North and coloured regiments raised South was very great and more strongly marked than any characterising white soldiers as compared with black. The blacks born and recruited South having just emerged from the condition of servitude imposed upon them since birth are far more dependent than the coloured regiments recruited North, showing that the further this race has been removed from the depressing influences of slavery, the closer has become their approximation to the whites in their physical development and capacity for becoming enduring soldiers."

It was also observed that northern negroes when removed to the South presented the same liability to malarial disease that attended the whites. But in the opinion of the writer, this was also true of those negroes raised at the South. Dr. J. C. Nott, of Mobile, denies that they have any exemption from malarial disease. In my own experience, the ratio of malarial and typo-malarial disease was about

the same in all three classes, whites, northern negroes, and southern negroes. This corresponds also with the facts reported by African travellers, Barth, Andersen, and Reade, who speak of great mortality from intermittent and bilious fevers of the Africans in their native jungles. The conclusion reached by Forry, Nott, Blodgett, and Drake, that "there is no such thing as acclimation to malaria," finds no exception in the negro. This is the uniform testimony of all surgeons in charge of coloured troops who have reported to this Commission.

The weight of evidence seems to place them upon the same level as the white, in regard to liability to malarial disease.

In *pulmonary diseases* we find the only excessive cause of mortality in the negro which seems to be inherent to his constitution. We have already spoken of the frequency of eruptive diseases among negroes, but this is due, evidently, to neglect of vaccination and to the protection against measles and scarlatina, afforded them by the isolated life of the plantation and the ease with which any particular focus of contagious disease could be quarantined under the social system of the South. And the fatality of these diseases among negroes is almost uniformly ascribed to their complication with pneumonic affections, intercurrent or secondary.

While it must be admitted that temporary causes had much to do with the frequency of lung diseases among negroes, it will still be found that they are vastly more liable to this source of mortality than the whites. In the process of escaping from his master to reach our lines, the slave was often exposed to great hardships, and in the transition period between his first day of freedom and his final enrolment as a soldier, these exposures were too often continued at a vast expense of life; yet it was found beyond, that when fairly enlisted, clothed and fed, and subjected to the same methods of life as the white soldier, he still exhibited a far greater ratio of death from pulmonic disease. On this point we quote *in extenso* from the valuable researches of Dr. Russell:—

"From the records of five hundred autopsies (four hundred and seventy-two of which were of coloured men) made at Benton Barracks, Mo.; Wilson Hospital, Nashville, Tenn., and L'Ouverture Hospital, Alexandria, Va., it appears that pneumonia and pleuro-pneumonia were found to exist, and were usually the cause of death, in four hundred and six out of the four hundred and seventy-two cases. Tuberculosis existed in thirty-seven cases only. All other diseases eight cases."

"In the Army of the Potomac, and in the hospitals at Alexandria and Fortress Monroe, the coloured troops suffered much less from pneumonia than in the west; and the same is also true of the white troops. Even previous to the war, the old army suffered much more

from it in the valley of the Mississippi than on the Atlantic coast. Especially was this the case at Jefferson Barracks, near St. Louis, Mo."

We are compelled, then, to believe that, independent of external causes, the negro is far more susceptible to pulmonary disease than the white. The physiological cause of this cannot, perhaps, be demonstrated; but great weight is due to the hypothesis that he has a tropical, or smaller, lung. In all, or nearly all, the autopsies we have quoted, the weights of the lungs were taken; but those weights were so much invalidated by the presence of various forms of solidification in the organ, that we are unable to use them in this connection. A careful series of weights of normal lung, to contrast with weights of an equal number of whites, is a great desideratum. It should be re-inforced by measurements and the volume and the expansibility of the living thorax. At present we are only able to suggest that, if the Arctic lung requires a capacity equal to the absorption of oxygen enough to convert into carbonic acid gas forty-five or fifty ounces of carbon daily, in order to maintain the animal heat in those cold regions, it would be in accordance with the economy of nature to suppose that the oxygen capacity of a tropical lung would be smaller than the Arctic, in the same ratio as the amount of carbon required to maintain animal heat in the sultry climates of the Equator. But this is not yet proven. The comparative frequency of tuberculosis in the two races, is by no means understood. Most surgeons in contact with the negro, are of opinion that he, especially the mulatto, is predisposed to consumption. This opinion is pretty nearly universal among them, and yet Dr. Russell, from his own studies, doubts the truth of the theory. Dr. Harris, of Cleveland, Ohio, himself a negro, and a close student of his race, is emphatic in the opinion, that the admixture of races does not impair physical endurance or fecundity, but, on the contrary, promotes both. Against these opinions rests a pretty general conviction that tuberculosis is a scourge of the negro, especially the mulatto, and that the fecundity of the latter is not equal to that of pure bloods. Common observation shows that the number of quadroons is much more numerous than that of "octo-rooms," and that the number of mulattos is much greater than that of quadroons. If there were no impediment of fecundity, the reverse would obtain. But this study lacks all the data which would ensure an exact and intelligent opinion.

Intellectual capacity. The negro, both by nature and education, is social and gregarious. His fondness for companionship is notorious and adds much to his adaptability to the crowded life of the camp. The negro encampment is always a cheerful and chatty place, en-

livened by music, dance, and sport. Nostalgia, even in the married soldier, is almost unknown, and, when he is well and well fed, I have never seen a case.

His intellectual acuteness has been very much blunted by centuries of ignorance and servitude, and it is now impossible to define his relative position—as a native and uncontaminated being—in the scale of races. His history in the land of his origin is one of continuous barbarism, with occasional wild outbursts of the brute element. On this continent, we behold a patient, long-suffering, religious man, who, under circumstances of great provocation and frequent opportunities, rarely commits those graver and more beastly crimes which disgrace human nature. His record during the war of rebellion is wonderful in its gentleness and Christian forgiveness. He has “waited patient on the Lord,” and not until the prison gates were thrown open did he attempt to come out into the light of freedom. It is with him as we find him now, and not with his barbarous ancestry, with him under the dispensation of Christ, and not under the curse of Ham—that we have to deal in this era.

It would be grossly unfair to subject the negro to a comparison of intellectual capacity based on his present manifestations of mental acuteness. In the Slave states he has been held in ignorance by law; in the free States subjected to a constant sense of inferiority. All the paths of competition have been barred against him, and, though in the North he has in occasional instances raised himself to prominence in intellectual combat, it has been over obstacles which might daunt the most enterprising.

We do not expect from the besotted peasant of feudalism any vindication of his membership in a superior race. How few are the cases in which the agricultural peasant of Russia, France, or even England, has achieved intellectual distinction! From our own feudalism, we can anticipate no different result. We must turn, then, from the illiterate—almost inchoate—intellect of the feudalised negro, undeveloped and uncomprehended as it is, to some other means of comparison. However deficient it may be, it is nearer the truth than it would be to demand energy, enterprise, and political sagacity of one who has not yet made acquaintance with the spelling-book.

Three modes of ascertaining the superiority or inferiority of races have been devised, which have reference only to physical facts, and depend for their correctness solely on the honesty and accuracy of the observer. One of these—that by external measurements of the cranium—is in itself essentially faulty, in that it makes no allowance for the thickness of the skull, though it has developed the fact that the Germans use larger hats than the Anglo-Americans of the

Northern States; these, larger hats than the same race in the Southern States; and these, again, very much larger than those worn by the Spanish-Americans of New Mexico, etc. The English infantry hat sent to the coloured West India troops was found much too large.

A second means of measuring intellectuality rests, like the former, on the size of the brain, and is based on the supposition that there is a direct ratio, between the mental and the cubic capacity of the cerebral mass. Prof. Samuel George Morton, the distinguished craniologist, has taken the internal measurements of more than six-hundred skulls, by filling them with peas or shot, through the foramen magnum, and then measuring the peas or shot by the usual method. His plan is ingenious, and only lacks an accurate knowledge of the race represented by the skull and a far greater number of observations to have a decided practical value.

The third plan is to ascertain the weight of the brain by post-mortem examinations, and is, *per se*, the more reliable.

All these measurements presuppose that the size and weight of the brain is the measure of its intellectuality—a theory probably correct in the main. The objections are these: The mental capacity of a brain probably depends upon its relative portion of grey substance; and, in two brains, of exactly equal weight and measurement, these may differ materially. Again, the distribution of the volume of a brain, whether in the anterior or posterior regions of the skull, may materially control its intellectuality. But all analogies and contrasts go to prove that, as a rule, the size of the brain has much to do with its mental power. Daniel Webster's gigantic head contained 122 cubic inches of brain; the Hottentot and the Australian have only 75 cubic inches. The Toltec Indian, now perished from the face of the earth, had 77 cubic inches; his conqueror, the barbarous North American, had 84 cubic inches.

For the sake of comparison we give, succinctly, the measurements in cubic inches as established by Morton:

	Mean. Cub. ins.
The Teutonic family, including English, Germans, and Americans (30 crania), has	92
The Pelagic, Celtic, Semitic, etc., have	88
The Malays, Chinese, Hindostanees, and Egyptians	83
The American Tottec Indian	77
The American barbarous Indian (161 crania)	84
The native African Negro (62 crania)	83
The American Negro (12 crania)	82
Hottentots and Australians	75

In contrasting the important races we find that the conquering Teutonic family outnumbers all the rest; that, by a singular parallelism, the conquerors (barbarous Indians) who preceded us on this

continent had seven inches the advantage over the annihilated Toltecs, and that the now perishing Indian has eight inches less of brain than his conqueror, the Teuton. And, not to be reconciled with the theory of a direct ratio between size and intellect, is the strange fact, that the Totecan, the semi-civilised Indian, who built the mounds of the West and the now buried cities of Mexico and Central America, was driven out by a conqueror who, with larger brain, has never manifested any tendencies toward civilisation.

The third method of estimating intellectuality by material conditions is, by ascertaining the weight of the brain in different races. Up to the present war the number of brains carefully weighed by anatomists was small, nor had any attempt been made to educe any difference that might be assigned to race. I have carefully collated all the records of weights accessible, and find, in all, 278 brains of white Europeans, mostly English and German, and given on the authority of Clendenning, Sims, Tiedemann and Reid. These tables give the mean weight of the white European brain at $49\frac{1}{2}$ ounces avoirdupois; the greatest weight given being 65 oz., and the smallest, 34 oz.

ETHNOGRAPHICAL TABLE,

Derived from 405 Autopsies of White and Negro Brains. Made under the direction of Surgeon Ira Russell, 11th Massachusetts Volunteers.

	Number of Autopsies.	Grade of Colour.	Average weight of brain.	Maximum weight of Brain.	Minimum weight of Brain.	Brains, 60 ounces and over.	Brains, 55 and under 60 ounces.	Brains, 50 and under 55 ounces.	Brains, 45 and under 50 ounces.	Brains, 40 and under 45 ounces.	Brains, 35 and under 40 ounces.	Brains less than 35 ounces.
	24	White.	oz. 52.06	oz. 64	oz. $44\frac{1}{4}$	1	4	11	7	1	...	...
	25	"	49.05	61	40	1	...	10	12	2	...	...
	47	"	47.07	57	$37\frac{3}{4}$	...	2	13	19	12	1	...
	51	"	46.54	59	$38\frac{3}{4}$	...	2	10	22	11	6	...
	95	"	46.16	57	$34\frac{1}{2}$	...	1	15	50	21	7	1
	22	"	45.18	$50\frac{1}{2}$	40	...	...	3	10	9	...	...
	141	Black.	46.96	56	$35\frac{3}{4}$	...	5	42	51	38	3	...
	405	...	...	...	...	2	14	104	171	94	17	1
Autopsies of Clendenning, Sims, Reid, and Tiedemann,	278	Whites, collated from various sources,	$49\frac{1}{2}$	65	34	7	28	99	97	39	7	1

Fortunately, in the same series of autopsies from which we have quoted in our statement as to the frequency of diseases of the lung,

we find the weight of the brain given in 405 cases, of which 24 were white and 381 were black. This number is larger than that of all the other brain-weights heretofore published, and is sufficient for satisfactory generalisation. It has, moreover, a special value in giving the grade of colour, whether black or mulatto, &c. The labour of this great number of autopsies was performed under the direction of Surgeon Ira Russell. The mode of classification has suggested itself to the writer.

The following laws would appear to obtain in the above table.

1st. The standard weight of the negro brain is over five ounces less than that of the white.

2d. *Slight* intermixtures of white blood diminish the negro brain from its normal standard; but, when the infusion of white blood amounts to one-half (mulatto), it determines a positive increase in the negro brain, which in the quadroon is only three ounces below the white standard.

3d. The percentage of exceptionally small brains is largest among negroes having but a small proportion of white blood.

The weights given in the table are much larger than those given by European anatomists, so far as the white race is concerned. Yet certain correspondences induce us to believe that such a difference actually exists and would be verified by a more extended research. In the vital statistics of this work the weight of the American soldier is found to be $5\frac{1}{3}$ pounds more than that of the French soldier, and 18 lbs more than that of the average English recruit of the age of twenty-one years. Again, there is a curious confirmation of Morton's measurements of the internal capacity in cubic inches of the human cranium. If, as he states, the standard capacity of the Teutonic cranium is 92 cubic inches, and that of the American negro 82 cubic inches, then, to prove this relationship, the white brain weighing 52 ounces, the negro brain should weigh just 46.40 ounces. It actually weighs 46.96 ounces. This is founded on the American measurements only. If we group together the whole mass of weights of whites, foreign and American, we shall have 302 brains of whites, average weight 49.7 ounces. Comparing this with the weight of 141 pure negro brains we find a difference of 2.74 ounces.

Supposing the matter of weight to be the essential condition of intellectuality, the average white has a competitive advantage over the average black of $5\frac{1}{2}$ per cent.; or, taking the 24 brains of white Americans as the standard of comparison, the competitive advantage of the white is $9\frac{1}{2}$ per cent.

Two important questions present themselves in this connection.—
1st. Morton's measurements seem to show that during two centuries

of servitude the negro brain, if it has not diminished in size, has not increased under the influences of slavery. Therefore the crucial experiment of the effect of freedom and education has only just begun. We cannot judge the ultimate capacity of the negro from that which he has thus far manifested. And 2d, so far as the 24 white brains enumerated can prove anything, they show that the American is heavier and larger than the European brain. If *it* has enlarged under our institutions, why may not the negro brain, subjected to new and invigorating influences, also increase its size?

The number of white brains weighed is too small for generalisation. It is simply a suggestion, not a scientific fact. To test it we must look to other conditions and inquire how far the climate and policy of the United States have affected or changed other and easily recognisable physical forms of man. The American is the child of Europe. Other things being equal, we should expect him to be a mere repetition of the European.

But there are evidences that the American, in founding a new nationality, has also established a new type of manhood. Of nearly 26,000 recruits from the New England and North Western States, Mr. Elliott informs us that the mean height was 5 feet 8½ inches. Of 27,853 recruits to the British army at home in 1860 the average height was 5 feet 6½ inches. The average height of the French army, for a series of years, was 5 feet 5¾ inches. Here, then, we find the American soldier is the tallest of the three, and so far as we can examine weights, we find him the heaviest, being 5½ pounds heavier than the French and 18 pounds heavier than the British soldier. In fine, there seems to be some reason to believe that the human brain, in the case of whites, has been increased in size by its transplantation to this continent, while in the case of blacks it has made no progress, but has, perhaps, deteriorated under the influences of slavery.

As between the two races, the problem is: Does the large brain by its own impulses create education, civilisation and refinement, or do education, civilisation and refinement create the large brain? This problem might be solved by a series of researches in the weight of brain of the poor whites of the south, known as "sand hillers," "low-down people," or "crackers." With them civilisation has retrograded. They came of a good stock originally, but have degenerated into an idle, ignorant and physically and mentally degraded people. Their general aspect would indicate small brains. If they are small it is due to the absence of educational influences.

In the present state of science, we can only refer to general opinion, which leans to the belief that it is within the power of educational causes to modify the form and size of the human brain to a consider-

able extent, and that the competitive success of the freedmen of this country rests upon the effort that may be devoted to their mental and moral elevation. They have already the same cranial capacity with the Hindostanees, who have developed a high civilisation, a profound philosophy and a rational religion.

We have thus stated, as elaborately as our limits will permit, the differences which exist between the black and white races. It will be seen that, for the purposes of the soldier, he has all the physical characteristics required, that his temperament adapts him to camp life and his morale conduces to his discipline. He is also brave and steady in action. His only disqualifications are found in his greater liability to pulmonary and exanthematous diseases and in the lack of education—perhaps of native intellect—that forbids his attainment to the rank of a commissioned officer. Neither of these objections are of sufficient moment to throw him out of the lists, and, in all subsequent wars, this country will rely largely upon its negro population as a part of its military power.

THE RACE QUESTION IN IRELAND.

By J. W. JACKSON, Esq., F.A.S.L.

THE day for the practical application of Anthropology has not yet arrived. Statesmen, although it is their business to govern men, know nothing of the science of man. And philosophers, although they profess to study human nature, prefer doing so in an abstract way, that ignores diversities of type and character as something beneath the dignity of a mind capable of a logical deduction of conclusions from the first principles of things. The result of this is, that whether in the executive or legislative department of government, we proceed on groundless assumptions and hastily formulated fallacies, which, in so far as they have any recognisable basis, seem to rest on the theological dogma of monogenism on the one hand and on the ultra-republican affirmation of racial equality on the other. As might be supposed, the effect of such grave misapprehension is often most lamentable. With an oceanic empire, that in its various settlements extends from the arctic almost to the antarctic circle, and which embraces not only European, but also Asiatic, African, and American peoples of almost every race, from the oceanic Negro to the high